

## Zoning Regulation as Land Use Control Instrument: Lesson Learned from United States of America and Singapore

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### Abstract

*One of local government authorities is the implementation of land use planning. Due to implementation land use planning, controlling is needed as effort for the implementation is appropriate with the planning. According to Spatial Planning Act No.26/2007, land use control instruments are zoning regulation, permit, incentive and disincentive, and sanction. In Indonesia, zoning regulation is new instrument and only a few of city that have made and uses zoning regulation as land use control instrument. Local government has to create zoning regulation and uses it to control land use in their area. Comparative study is needed to learn from other countries that use zoning regulation as land use control instrument successful. United State of America and Singapore are relevant as cases study because of their success in using of zoning regulation. This study used a descriptive approach with literature sources. The results show that: (1) there is similarity between United State of America (USA) and Singapore in success using zoning regulation as instrument of land use control; (2) There is different type of land use control system. Most of cities in USA, except Houston City, use regulatory system. In this system, decision for a land use application is only based on zoning regulation. While Singapore uses discretionary system, the owner's right to develop is controlled, not only by a zoning regulation, but also by a planning authority's discretion.*

**Keywords:** zoning regulation, land use control, regulatory system, discretionary system

### 1. Introduction

According to Spatial Planning Act No.26/2007, one of the authorities given to local government is the implementation of land use planning. In the implementation of spatial planning, local governments have the authorities that include: a) making of land use planning, b) implementation of land use planning, and c) controlling of land use implementation. Based on legislation, land use control in Indonesia is carried out through the establishment of zoning regulation, licensing, provision of incentives and disincentives as well as the imposition of sanctions (Spatial Planning Act No.26/2007 Section 35). Essentially zoning regulation is an instrument of land use control and zoning

regulation is prepared on a detailed plan for each zone and as guideline for land use control.

In Indonesia, zoning regulation is new and not many regencies/cities that have developed and implemented this regulation as an instrument of land uses control, so that the success of its application also can't be viewed. Style land use control such as what is good for Indonesia is still growing. In applying its own zoning regulation still need time for this zoning regulation become more known to the public and local government.

Some countries have successfully made the zoning regulation as an instrument of land use control, such as the United States of America which has developed zoning regulation since the

early of 20th century (Leung, 1989). First modern zoning regulation applied in the New York City in 1916. Singapore also has successfully succeeded in land use control since more than 20 years ago. Therefore it is necessary to study about the success of land use control in the United States of America and Singapore that use zoning regulation as land use control instrument.

This study aims to know the land use control systems of the United States of America and Singapore. This study also aims to know the success of the United States of America and Singapore in land use control with zoning regulation as land use control instrument.

This article describes the land use control system in the world and the zoning regulation. In the next section, this article explains the land use control systems that are applied in the United States of America and Singapore. These countries are equally successful in controlling of land although there are differences in some aspects.

## 2. Fundamental

### Land use control

Various forms of land use control have existed since the beginning of settlement formation. The basic purpose of controlling land use is usually to establish restrictions on the use and development of land that are considered important and the general public desires. There are several instruments of land use control in accordance with the objectives of urban planning (Branch, 1985), among others: (1) building regulations, (2) the distribution of parcels, (3) zoning regulation, (4) the imposition of sanction, (5) provision of incentives and disincentives, and (6) environmental impact analysis.

According to Booth (in Cullingworth, 2009), spatial planning in the world, can be divided into two systems are regulatory system and discretionary system. In the regulatory system, the implementation of land use planning based on legal certainty in the form of zoning regulation. One of countries that apply this system is the United States of America. Regulatory system is the first time in Germany and then spread to the United States of America (Booth, in Cullingworth, 2009). While the discretionary system, decision-

making towards a request for land use based on the consideration of a planning authority.

Countries that adopt this system are such as England and Singapore. In practice of discretionary system, the development plan and zoning regulation is used not as a fundamental instrument in the land use control (Ratcliffe, 1974). The plan set out in the land use map is not the sole basis for decision-making development. A planning authority is entitled to consider other aspects that are considered important for making decisions.

### Zoning regulation

Essentially zoning regulation is an instrument of land use control so that this discussion will look at the position of zoning regulation in urban planning. Implementation of land use planning involves three stages, namely: a) making of land use planning, b) implementation of land use planning, and c) controlling of land use implementation.

Implementation of land use to conform with land use planning that has been made, require the rules that control land use. One of land use control instruments is zoning regulation. Zoning regulation has been prepared based on detailed plans for each zone and conceived as land use control guidelines. Zoning regulations has been recognized as one instrument to regulate land use, not only in the United States but also many other countries (Gallion and Eisner, 1994 and Lang, 1994). In some countries, zoning regulation also is known as land development code, zoning code, zoning Ordinance, zoning resolution, zoning by-law, urban code, planning act, and etc.

According to Babcock (1979: 416), zoning is defined as: "Zoning is the division of a municipality into districts for the purpose of regulating the use of private land." The division of regions into several areas with the rule of law enacted through zoning regulation, in principle, aimed at separating development in the industrial and commercial areas from residential areas.

The concept of zoning was developed in Germany in the late 19th century (Leung, 1989: 158) and spread to other countries like the United States and Canada in the early 20th century as a response to industrialization and the increasing

public complaints of privacy disturbed. It is the adverse effect of urbanization and population growth so that the government should immediately act to find ways as solution.

Zoning regulation is a tool for the government as holder of authority (police power) to protect the health, safety, and welfare of the public (Gallion and Eisner, 1994). Expressed similar views of Lai and Schultz (in Lang, 1994), zoning regulation is an instrument that regulate urban growth and development associated with the public interest. Zoning regulation focuses on environmental sanitation, land use distribution arrangement and to create an efficient circulation pattern (Lang, 1994).

Among its many purposes, general zoning regulation may be used to:

- Protect public health, safety and general welfare
- Promote desirable development patterns
- Separate incompatible uses
- Maintain community character and aesthetics
- Protect community resources such as farmland, woodlands, groundwater, surface waters, historic or cultural resources
- Protect public and private investments
- Implement a comprehensive plan

### **3. Research Method**

The study of zoning regulation as an instrument of land use control used a descriptive approach to the literature study. Sources of literature review are from various sources such as book, paper and journal.

### **4. Result and Discussion**

#### **Land use control in United States of America**

Zoning as a development control tool is used extensively in the United States of America. The idea was first used in Germany at the end of the 19<sup>th</sup> century, transferred and adapted for use in the United State of America in the early 20<sup>th</sup> century, and later extended to Canada (Leung, 1989). Modern land use regulation began with the first comprehensive zoning ordinance, adopted by New

York City in 1916. Earlier municipal laws prohibited noxious uses in residential neighborhoods, but New York was the first to adopt a comprehensive zoning ordinance assigning land uses to zoning districts throughout the country.

The U.S. Department of Commerce established The Standard State Zoning Enabling Act in the 1922. Every state adopted, either as published or with minor variations. State planning and zoning legislation is based on the Standard Zoning Act. Some of state such as California, New Jersey and Pennsylvania modified The Standard Act appropriate with their requirements. Although the Standard Zoning and Planning Act provide an important common denominator for land use law, the details of land use doctrine vary considerably among the states (Mandelker, 1993 : 1-15).

All cities in the United States of America except Houston City, Texas, apply regulatory system in the planning system. Regulatory system is in decision-making based on spatial planning regulations in force. Therefore, in the United States of America, zoning regulation became the main instrument in securing the right of every citizen to use their own properties.

Houston is the only one of cities in the United States which does not use zoning regulation as an instrument of land use control. Houston is constantly in the forefront of the zoning debate as being the city which proves that zoning, and all the problems that accompany it, is unnecessary. A superior system is one in which owners enter into private covenants which provide all the protection that is needed. Houston has no citywide traditional zoning laws. In place of zoning, Houston uses a system of deed restrictions, or restrictive covenants, as the primary method of land use control. The terms of the covenants vary greatly and are often the subject of agreement between the developer and her mortgage lender and they are recorded prior to the sale of any lots. Since 1965, Houston has had legislative authority to assist and spend municipal funds on the enforcement of private deed restrictions. This has given the city an important land planning technique (Cullingworth, 1993).

With the enactment of zoning regulation as the state authority, the zoning regulation described the police power. Furthermore, the states if deemed necessary to submit to local government and county (Branch, 1985). Police power is authority to make and enforce laws to protect health, safety, morals and welfare of residents, both enacted on local and national level. This authority is retained by the state during the formation of the federal government. Only when related to national welfare and when local governments are not capable of handling the situation, then the state deems it necessary to request federal assistance (Gallion and Eisner, 1996).

There are two part of zoning regulation in the United States of America (Levy, 1997):

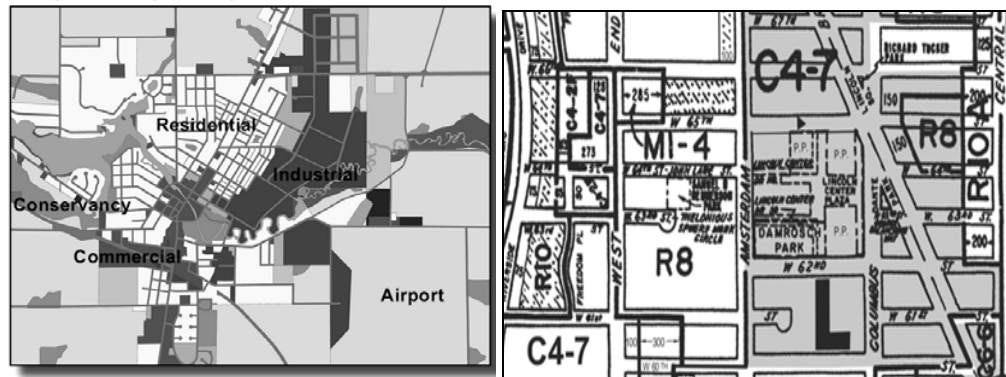
1. Zoning text, which specifies in considerable detail what may be constructed in each zone and to what uses structures may be put.
  - a. Site layout requirements. These may include, among other things, minimum lot area, frontage and depth, minimum setbacks (minimum distance from structure to front, side, or rear lot line), maximum percentage of site that may be covered by structure, placement of driveways or curb cuts, parking requirements, and limits on the size or placement of signs).
  - b. Requirements for structure characteristics. These may include maximum height of structure, maximum number of stories, and maximum floor area of structure. The last is often cast in term of floor area ratio (FAR), which indicates a maximum permissible ratio of floor area to site area.
  - c. Uses to which structures may be put. In a residential zone the ordinance might specify that dwellings may be occupied only by single families and then proceed to define what constitutes a family. The ordinance might also enumerate certain nonresidential uses permitted in the zone

such as churches, funeral homes, and professional offices. In commercial zones the ordinance will generally specify which uses are permitted and which are not. For example, in a manufacturing zone the ordinance might specify that sheet metal fabrication operations are permitted but that rendering operations are forbidden.

- d. Procedural matters. The ordinance will specify how it is to be determined whether building plans are in conformity to the zoning ordinance. (A common arrangement is that the building inspector shall make such determination and must deny a building permit application if they are not). The ordinance will generally also specify an appeals procedure by which an applicant can apply for relief. In many communities the initial appeal authority is vested in a special body generally referred to as the Zoning Board of Appeals. When this is not the case, the review process is often assigned to the planning board or to the municipal legislative body.
2. Zoning map that divides the community into a number of zones. The map is sufficiently detailed so that it is possible to tell in which zones any given parcel of land lies. Most commonly, all of the community is zoned. However, there some cases, particularly nonurban counties, in which part of a community is zoned and part is not.

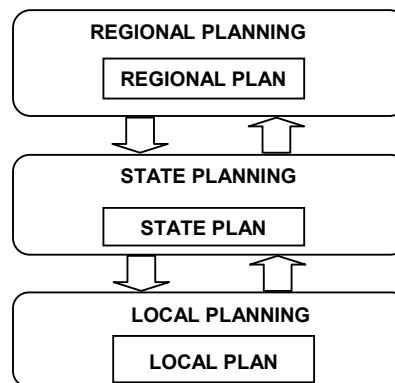
Prominent elements which are in zoning regulation are land use districts, performance standard, density and Bulk controls, parking and off-street loading, signs, accessory uses and home occupations, nonconformities, aesthetic and open space preservation.

Zoning regulations divide a region into several zones and general classification of the main categories of the zone include agriculture zone, residential zone and commercial zone (Branch, 1985).



Source: <http://www.nyc.gov>

**Figure 1.** Zoning regulation of New York City contains maps and text that regulate the uses of land and dimensions and placement of structures within various zoning districts. The zoning map shown at left uses district boundaries to separate uses.



Source: Levy (1988), Mandelker and Cunningham (1990)

**Figure 2.** Planning System in United States of America

### Land use control in Singapore

The first town plan in Singapore was prepared by Lt. Jackson in 1827, under the supervision of Sir Stamford Raffles and is known as Plan of Jackson. The plan showed the various zones intended for the different ethnic communities. Thus, the European, Indian, Chinese, Malay and Arab communities were physically segregated, and this system of separation of the races continued until the post independence era when a deliberate policy was introduced to provide public housing on a massive and impressive scale whereby all races could co-exist in harmony in the various public housing estates.

England legislated the Housing, Town Planning etc (sic) Act of 1909 had influenced and

with the emergence of awareness of environmental health, the colonial government of Singapore to enact regulation of Planning (Planning by Law) in 1913 to regulate housing development. The colossal destruction caused by the second World War gave the impetus for the application of new ideas in planning and the land use control in England. The present system of planning control was introduced by the town and Country Planning Act 1947. Many countries have benefitted from the English experience including Singapore. The meaning of develop in the Planning Act of Singapore is based on the English town and Country Planning Act 1947. England is also the pioneer in the development of new towns, which serve as a lesson Singapore in the planning

of its own new towns, though not necessarily with the same objectives in mind.

The planning system in Singapore, as in England, is concerned not only with the making of plans but also with the control of development. The control of development, or to be more specific, the control of change in land use and buildings, is exercised through development control. While the Master Plan and the Concept Plan set out the land use policy. Development control is concerned with the implementation of that policy and is through this scheme that most people come into contact with the planning system. It is the application for permission to build which links the development process to the planning process. Development control is primarily concerned with public control of land use and is carried out through the legal machinery operating under the Planning Act. In view of this statutory foundation, development control in Singapore is usually referred to as statutory planning (Khublall and Yuen, 1991:2).

The purpose of government intervention in the use and development of lands is to guide developers collectively to make the best use of national resources in the interests of the community as a whole. Furthermore Khublall and Yuen (1991:6) said that the main objective of the statutory planning is to prevent undesirable development of land and to ensure that in the development of land public interest is fully considered.

In 1957, Singapore made a Statutory Plan and the Non Statutory Plan to manage the physical development (Khublall & Yuen, 1991:13). The England Act gives effect in the preparation and implementation of master plan for Singapore. The Master Plan is a comprehensive physical plan with emphasis on the arrangement of land use in order to regulate the physical development, whether conducted by private parties or by the government itself. The Master Plan 1958, subject to 5-yearly reviews, had many characteristics that were similar to the 1944 Greater London Plan. The Master Plan gave emphasis to comprehensive development through physical planning, specifically the control of land use through zoning and density controls. Property owners wanting to

change the use of their land must conform to the requirements of the Master Plan (Yuen, 1998:2).

To provide legal support, a Planning Ordinance 1959 was the first statute of major importance directed at planning matters in Singapore and was supplemented by the Housing and Development Ordinance passed around the same time (Khublall & Yuen, 1991). This legislation was formulated to develop a planning system in conformity with the Master Plan. Development control is primarily effected through the zoning and density prescriptions set out in the Master Plan and the rules and regulations embodied in the Planning Ordinance, now the Planning Act (Yuen, 1998:2).

In the rapidly changing economic and social conditions of post-independence years, the Master Plan soon inadequate. Its uses as a planning document has since been overshadowed by the Concept Plan, a strategic land use and urban transportation plan. Present day Singapore is to large extent an expression of the planning principles embodied in the Concept Plan.

The Singapore Concept Plan was first drafted in 1970 with the assistance of a United Nations expert team to guide the country's long-term development. It is a land use planning blueprint designated by a specialized role for meeting the national goal of modernization and to raise Singapore's economic standing underlain in respect of industrialization, public housing, infrastructure and building a modern central financial district. In responding to the set targets assigned, planning practitioners have to conceive strategic and concrete measures in order to realize them and to bring their actions to a fruitful end wherever possible (Wong and Goldblum, 2008:7).

The Singapore Concept Plan has a long-standing reputation for being continuous, and its consistency has been rendered possible by the same government being in charge over the last four decades. Established in 1971 on the basis of an export and multinational-led land use strategy, a full urbanization and infrastructural provision, supported by a "garden city" notion had been conceived to lift Singapore from a small to a large regional centre (Ministry of Trade and Industry 2003 in Wong and Goldblum, 2008).

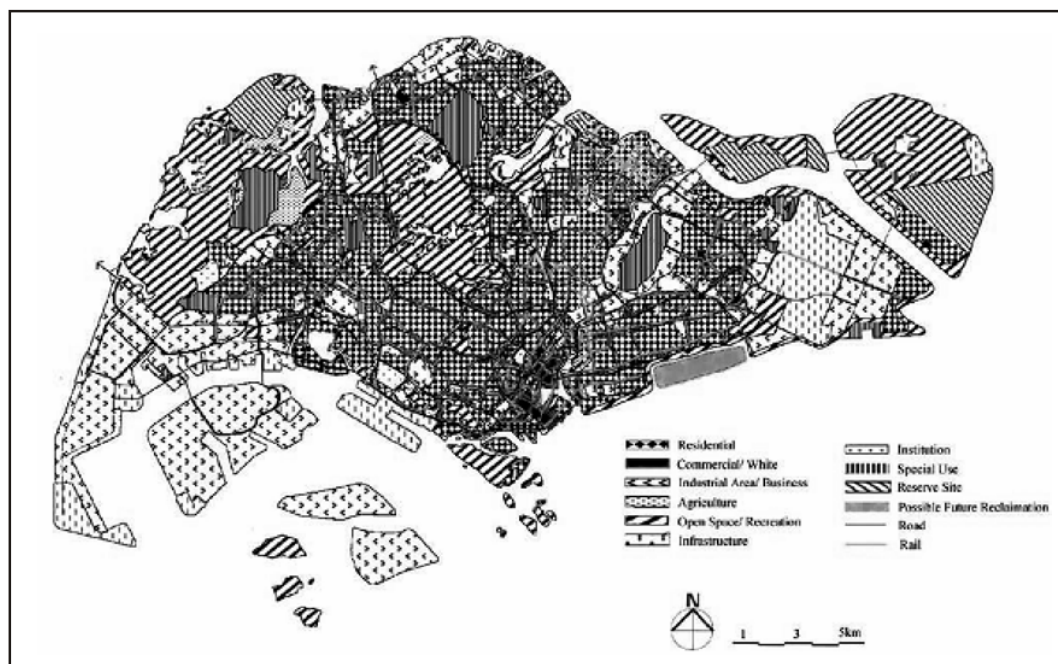
Since 1990 Singapore uses Two Tier System (two-level system) in the Non Statutory Plan. The first level is the Concept Plan which laid the general framework of development policy and strategy, while level two is The Development Guide Plan.

In 1998, a new approach to planning was adopted that the Concept Plan maps out the long term land use and development strategy for the year 2000 and beyond whilst the Development Plans (DGPs) translate the intentions of the Concept Plan to guide development at the local level. The whole of Singapore is divided into 55 planning areas. The contents and provisions of the Development Guide Plans for the various planning areas when incorporated into the Master Plan are applied to guide physical development through development control. These contents and provisions, and in particular any upgrading or change of zoning or plot ratio, do not confer development rights nor should they be taken as the basis for determining the liability for payment of development charge (URA, 1998).

The planning Act requires all development and subdivision of land to obtain written

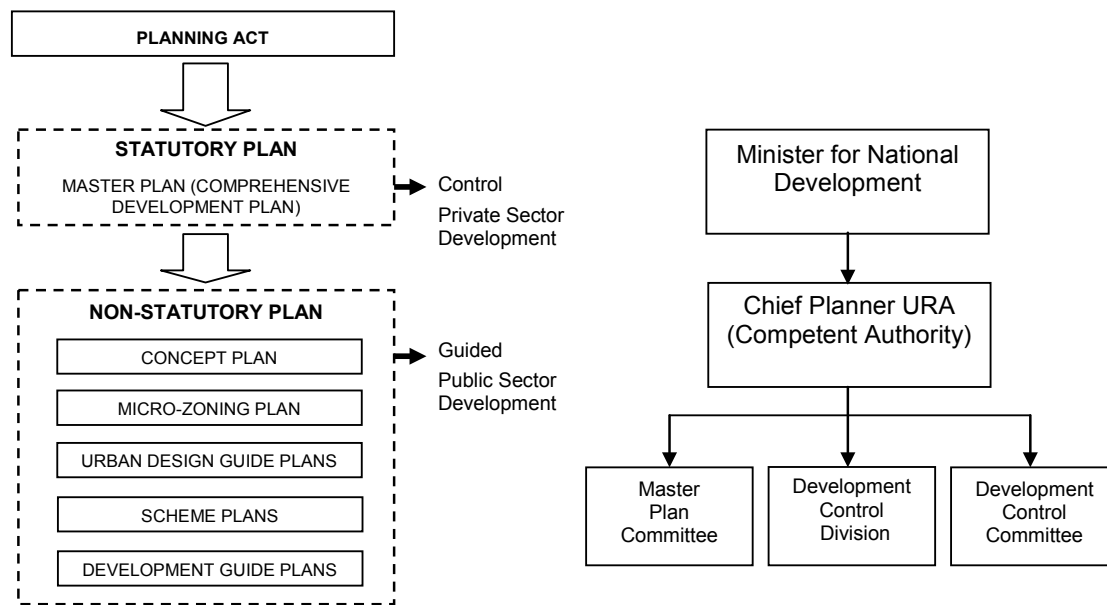
permission in the form of a formal approval from the planning authority before they can be carried out. To optimize land distribution among competitive uses, all development activities related to land use planning and land allocation are administrated and coordinated by a central planning authority, presently the URA (Urban Redevelopment Authority) since 1 September 1989 (Yuen, 1998:2).

The day-to-day administration of the Planning Act is the responsibility of the URA and the Chief Planner is as Chief Executive Officer of URA. URA is the central planning authority responsible for the physical planning and improvement of Singapore. Its main function are to prepare and revise the Master Plan, periodically review the Concept Plan, control land use and development, implement conservation and coordinate public sector development proposals. In addition to being concerned with planning matters the URA has been appointed the national conservation authority (Khublall and Yuen, 1991:32-33).



Source: Wong and Goldblum, 2008

**Figure 3.** Concept Plan of Singapore



**Figure 4.** Planning System in Singapore and Institutional Framework of Planning Authority

## 5. Conclusion

United States of America and Singapore are equally successful in controlling of land use but there are differences in land use control system that is implemented in decisions relating to land use.

Almost all cities in the United States of America except Houston City, apply regulatory system in the planning system, namely in decision-making based on spatial planning regulations including zoning regulation. Therefore, in the United States of America, zoning regulation became the main instrument in securing the right of every citizen to take advantage of their own property.

Meanwhile, Singapore applies discretionary system for land use control. This system provides opportunities for local government to consider a development proposal based on the development plan, including zoning regulation and other aspects that are considered important as a consideration in making decisions.

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